

IN THE CLAIMS:

The currently pending claims are provided below.

Please amend claims 1, 10, 18, 22, and 23 as follows:

1. (Currently Amended) A network, comprising:
- a first node comprising a first plurality of first-in, first-out (FIFO) queues arranged for high priority to low priority data movement operations; and
- a second node operatively connected to said first node by multiple control and data channels, said second node comprising a second plurality of FIFO queues arranged in correspondence with said first plurality of FIFO queues for high priority to low priority data movement operations via said multiple control and data channels;
- wherein an I/O transaction is being accomplished by one or more control channels and data channels created for moving commands and data separately between said first node and said second node during said data movement operations, in the order from high priority to low priority.
2. (Original) A network as claimed in claim 1, wherein said control channels are used to prioritize command processing, and each control is assigned with a different priority by one of the nodes that is en-queuing the commands to be executed based on the quality of service desired.

3. (Original) A network as claimed in claim 2, wherein said first plurality of FIFO queues include a high priority FIFO queue provided to queue commands for urgent traffic, a low priority FIFO queue provided to queue commands for normal traffic, and another FIFO queue provided to queue data for data movement operations.

4. (Original) A network as claimed in claim 1, wherein said data is transmitted in groups of cells with each cell having a header utilized for indicating whether the cell is transmitted in a priority order.

5. (Original) A network as claimed in claim 4, further comprising a multi-stage switch which comprises a plurality of different routes for connecting said first node and said second node for data movement operations.

6. (Original) A network as claimed in claim 4, wherein each of said first node and said second node includes one or more channel adapters configured with a multiplexing function based on a priority order for multiplexing and transmitting back to back cells of the same priority from multiple FIFO queues through assigned control or data channels.

7. (Original) A network as claimed in claim 2, wherein said data is spread between multiple data channels to prioritize data processing while concomitantly decreasing latency and increasing bandwidth during said data movement operations.

8. (Original) A network as claimed in claim 1, wherein said first node and said second node are channel endpoints of the network implemented in compliance with the "Next Generation Input/Output (NGIO) Specification".

9. (Original) A network as claimed in claim 8, wherein said multiple control and data channels are directly supported by the "Virtual Interface (VI) Architecture Specification" and the "Next Generation Input/Output (NGIO) Specification" for multiple priorities of traffic to allow for varying types of information to pass between endpoints with varying precedence.

10. (Currently Amended) A network arrangement, comprising:

- a host system;
- at least one remote system;
- a switch fabric comprising a plurality of different switches which interconnect said host system to said remote system along different control and data channels for data movement operations;
- said host system comprising multiple first-in, first-out (FIFO) queues arranged for high priority to low priority data movement operations; and
- said remote system comprising multiple first-in, first-out (FIFO) queues arranged in correspondence with said host system multiple FIFO queues for high priority to low priority data movement operations;

~~wherein~~ an I/O transaction is being accomplished by one or more control channels and data channels created for moving commands and data separately between

said host system and said remote system during said data movement operations, in the order from high priority to low priority.

11. (Original) A network arrangement as claimed in claim 10, wherein said control channels are used to prioritize command processing, and each control channel is assigned with a different priority by one of the nodes that is en-queuing the commands to be executed based on the quality of service desired.

12. (Original) A network arrangement as claimed in claim 10, wherein said FIFO queues of one of said host system and said remote system include a high priority FIFO queue provided to queue commands for normal traffic, and another FIFO queue provided to queue data for data movement operations.

13. (Original) A network arrangement as claimed in claim 10, wherein said data is transmitted from said host system to said remote system in groups of cells with each cell having a header utilized for indicating whether the cell is transmitted in a priority order.

14. (Original) A network arrangement as claimed in claim 13, wherein each of said host system and said remote system includes one or more channel adapters configured with a multiplexing function based on a priority order for multiplexing and transmitting back to back cells of the same priority from multiple FIFO queues through assigned control or data channels.

15. (Original) A network arrangement as claimed in claim 10, wherein said data is spread between multiple data channels to prioritize data processing while concomitantly decreasing latency and increasing bandwidth during said data movement operations.

16. (Original) A network arrangement as claimed in claim 10, wherein said host system and said remote system are channel endpoints of the network implemented in compliance with the "Next Generation Input/Output (NGIO) Specification".

17. (Original) A network arrangement as claimed in claim 10, wherein said multiple control and data channels are directly supported by the "Virtual Interface (VI) Architecture Specification" and the "Next Generation Input/Output (NGIO) Specification" for multiple priorities of traffic to allow for varying types of information to pass between said host system and said remote system with varying precedence.

18. (Currently Amended) A method for providing prioritized data movement between a source node and a destination node in a data network, said method comprising:
establishing one or more control channels and one or more control channels and one or more data channels between said a source node and said a destination node for transferring commands that describe data movement operations from said source node to said destination node and for moving data from said source node to said destination node;

assigning a logical priority to each control channel for transferring high priority commands to move across the control channel before low priority commands during said data movement operations; and

transferring, at said source node, data in groups of cells to said destination node along the data channel.

19. (Original) A method as claimed in claim 18, further comprising:
assigning a logical priority to each data channel for high priority data to move across the data channel before low priority data during said data movement operations; and

moving, at said source node, high priority data in groups of cells to said destination node along the data channel before low priority data during said data movement operations.

20. (Original) A method as claimed in claim 18, wherein said data is transmitted from said source node to said destination in groups of cells with each cell having a header utilized for indicating whether the cell is transmitted in a priority order.

21. (Currently Amended) A node comprising:
a first plurality of first-in, first-out (FIFO) queues arranged for high priority to low priority data movement operations; and
an interface for operatively coupling said node to another node by multiple control and data channels, said first plurality of FIFO queues being arranged to

correspond with a second plurality of FIFO queues in said another node, such that an I/O transaction is accomplished, by one or more control channels and data channels created for moving commands and data separately between said node and said another node during said data movement operations, in order from high priority to low priority.

22. (Currently Amended) A ~~computer-readable~~ machine-readable medium having stored thereon on a plurality of ~~that stores computer-executable instructions for transferring commands and data from a first node to a second node~~, said instructions causing a computer to perform a method comprising:

arrange ~~arranging~~ a first plurality of first-in, first-out (FIFO) queues, located within ~~the~~ a first node, for high priority to low priority data movement operations; and

operatively ~~couple~~ coupling said first node to ~~said~~ a second node by multiple control and data channels, such that an I/O transaction is be accomplished, by one or more control channels and data channels created for moving commands and data separately between said first node and said ~~another~~ second node during said data movement operations, in order from high priority to low priority.

23. (Currently Amended) A ~~computer-readable~~ machine-readable medium having stored thereon a plurality of ~~that stores computer-executable instructions for transferring commands and data from a source node to a destination node~~, said instructions for causing a computer to perform a method comprising:

establish ~~establishing~~ one or more control channels and one or more data channels between ~~said~~ a source node and ~~said~~ a destination node for transferring commands that

describe data movement operations from said source node to said destination node and
for moving data from said source node to said destination node;

~~assign~~ assigning a logical priority to each control channel for transferring high
priority commands to move across the control channel before low priority commands
during said data movement operations; and

~~transfer~~ transferring, at said source node, data in groups of cells to said destination
node along the data channel.
